

VI.1

MEMO TO: City Council

FROM: Rosemarie Ives, Mayor

DATE: October 5, 2004

SUBJECT: **ORDINANCE: ESTABLISH A 30-MPH SPEED LIMIT ON 185TH AVENUE NE FROM REDMOND-FALL CITY ROAD/SR-202 TO NE UNION HILL ROAD**

I. RECOMMENDED ACTION

Adopt the proposed ordinance amending Section 10.24.060 of the Redmond Municipal Code to establish the speed limit of 30-mph on 185th Avenue NE between Redmond-Fall City Road/SR-202 and NE Union Hill Road.

II. DEPARTMENT CONTACT PERSONS

Dave Rhodes, Director of Public Works	556-2705
Don Cairns, Transportation Division Manager	556-2834
Dave Alm, Transportation Operations Manager	556-2875
Deby Canfield, Senior Engineering Technician	556-2752

III. DESCRIPTION

The street classification for 185th Avenue NE is as a “collector arterial street”, and it currently carries traffic from Redmond-Fall City Road/SR-202 to just north of NE 76th Street. In the future it will continue north to NE Union Hill Road. The official speed limit on this roadway is currently posted at 25-mph. There is a traffic signal at the intersection of Redmond-Fall City Road/SR-202 and 185th Avenue NE, and one is planned at the intersection of Union Hill Road and 185th Avenue NE in the future. Existing development along this corridor consists of primarily industrial and business park uses with driveways directly accessing 185th Avenue NE. On-street parking is permitted on both sides of the street along most of the corridor.

Speed limits other than the RCW basic rule for maximum speed limits of 25-mph for city streets may be set by local ordinance, and are generally based on the national practice of using the 85th percentile speed recorded by a radar spot speed survey of free flowing vehicles on the roadway. In a sample survey of 100 vehicles, 85 are traveling at or below this speed and 15 of the vehicles are traveling at a higher speed. Redmond typically sets speed limits within 5-mph of the 85th percentile speed. Recent radar spot speed surveys conducted along 185th Avenue NE indicate an 85th percentile speed of 35-mph.

A 10-mph range that contains the largest number of vehicles in the survey is also a good indicator for where to place the posted speed. Approximately 56% of the sample fell within the 10-mph range of 26-mph to 36-mph. Other factors involved in a decision to determine appropriate speed limits include roadway geometry and design speed, accident records, sight distance and surrounding land use. (See Attachment E for more information regarding speed zoning.)

The current posted speed limit of 25-mph is 10-mph lower than the 85th percentile speed and at the bottom end of the 10-mph pace. City of Redmond Police and Fire personnel have requested an increase in the posted speed limit to more accurately reflect actual driving conditions and driver behavior. The speed limit on this corridor has been discussed at Traffic Safety Committee meetings that include staff from Public Works, Police and Fire. All were in agreement that a posted limit of 30-mph is appropriate for this street.

A review of accident records along this corridor during a four-year period reveals no reported accidents related to speed, on-street parking or driveway access have occurred since November, 2002.

Based on roadway design and classification, current and anticipated increases in traffic volumes, recent radar spot speed surveys, and the desire to provide safe driving conditions for motorists, staff recommends adoption of an ordinance establishing a 30-mph speed limit on 185th Avenue NE between Redmond-Fall City Road and NE Union Hill Road.

IV. FISCAL IMPACT

There is no fiscal impact associated with this project. Changing the speed limit signs from 25-mph to 30-mph will be handled as a regular maintenance item.

V. ALTERNATIVES

The Council could choose not to approve the 30-mph speed limit and the street would remain at 25-mph.

VI. TIME CONSTRAINTS

None.

VII. ATTACHMENTS

- A. Vicinity Map
- B. Ordinance
- C. Radar Spot Speed Survey
- D. Four-year Accident Statistics
- E. Standard Practice on Setting Speed Limits
- F. Schedule of Speed Limits

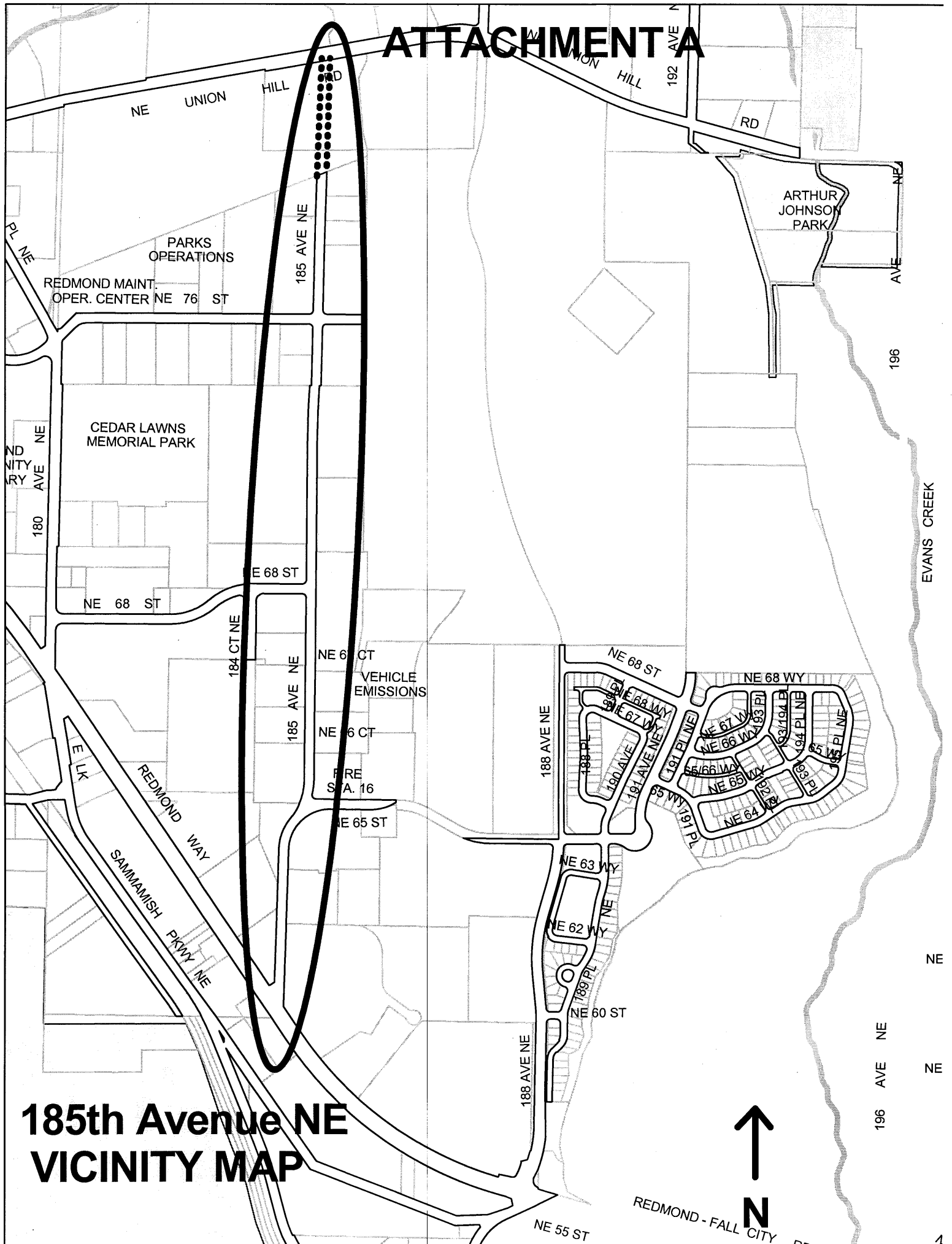
s/s
David Rhodes, Director of Public Works

9/27/04
Date

Approved for Council Agenda **s/s**
Rosemarie Ives, Mayor

9/28/04
Date

ATTACHMENT A



ATTACHMENT B

00020.900175

:asb

08/18/04

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY OF REDMOND, WASHINGTON AMENDING SECTION 10.24.060 OF THE REDMOND MUNICIPAL CODE; ESTABLISHING THE SPEED LIMIT ON 185TH AVENUE NE BETWEEN REDMOND-FALL CITY ROAD/SR-202 AND NE UNION HILL ROAD; AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, 185th Avenue N.E. is a collector arterial street that currently carries traffic from Redmond-Fall City Road/SR-202 to just north of N.E. 76th Street; and

WHEREAS, this portion of 185th Avenue N.E. currently is posted with a speed limit of 25 miles per hour; and

WHEREAS, in the future 185th Avenue N.E. will continue north to N.E. Union Hill Road; and

WHEREAS, based upon recent radar speed surveys, roadway geometry and design speed, accident records, sight distance, and surrounding land use, the City's Public Works Department has recommended that the speed limit along 185th Avenue N.E. between Redmond-Fall City Road/SR-202 and N.E. Union Hill Road be established at 30 miles per hour; and

WHEREAS, the City Council has reviewed the recommendation and has determined to amend Section 10.24.060 of the Redmond Municipal Code accordingly; NOW, THEREFORE,

THE CITY COUNCIL OF THE CITY OF REDMOND, WASHINGTON DO ORDAIN AS FOLLOWS:

Section 1. Speed Limit on 185th Avenue N.E. between Redmond-Fall City Road/SR-202 and N.E. Union Hill Road. The Schedule of Speed Limits in Section 10.24.060 of the Redmond Municipal Code is hereby amended to add a line regarding the speed limit on 185th Avenue N.E. to read as follows:

State Route No./ City Street Designation	Traffic Direction	From	To	Maximum Speed
185th Avenue NE	Both ways	Redmond-Fall City Road/SR-202	N.E. Union Hill Road	30 mph

Section 2. Duties of Public Works Department. The Public Works Department shall post such signs and install such other traffic control devices as may be deemed appropriate and necessary to give notice of the speed limit established under Section 1 of this ordinance.

Section 3. Effective Date. This ordinance, being the exercise of a power specifically delegated to the City legislative body, is not subject to referendum, and shall take effect five (5) days after passage and publication of an approved summary thereof consisting of the title. The speed limits established by this ordinance shall be enforced upon the posting of such signs and installation of such traffic control devices as are required under Section 2 above.

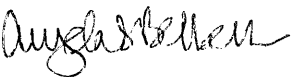
APPROVED:

MAYOR ROSEMARIE M. IVES

ATTEST/AUTHENTICATED:

CITY CLERK BONNIE MATTSON

APPROVED AS TO FORM:
OFFICE OF THE CITY ATTORNEY:

BY 
for JAMES E. HANEY

FILED WITH THE CITY CLERK:
PASSED BY THE CITY COUNCIL:
PUBLISHED:
EFFECTIVE DATE:

ATTACHMENT C

Traffic Engineer's ToolBox

JB Technology Inc.

Spot Speed Study Report City of Redmond EVALUATION COPY - PLEASE REGISTER August 03, 2004

Location: 185th Avenue NE & NE 68th Street
Direction: NorthBound & SouthBound
Study Period: 11:33:00 AM to 12:04:00 PM
Posted Speed Limit: 25 m.p.h.
Weather Condition: Overcast & Dry

Leg: South
Date: 8/3/2004

SPEED GROUP	VEHICLES IN GROUP	PERCENT IN GROUP	CUMULATIVE PERCENT IN GROUP
10 - 14	0	0.00	0.00
15 - 19	0	0.00	0.00
20 - 24	7	7.00	7.00
25 - 29	37	37.00	44.00
30 - 34	41	41.00	85.00
35 - 39	12	12.00	97.00
40 - 44	3	3.00	100.00
45 - 49	0	0.00	100.00
50 - 54	0	0.00	100.00
55 - 59	0	0.00	100.00
60 - 64	0	0.00	100.00
65 - 69	0	0.00	100.00
70 - 74	0	0.00	100.00
75 - 99	0	0.00	100.00

Total Vehicles in Study: 100 Vehicles

Standard Deviation: 4.37 m.p.h. / 7.03 k.p.h.

Mean Speed: 30.86 m.p.h. / 49.66 k.p.h.

Median Speed 30 m.p.h. / 48.28 k.p.h.

Ten Mile Pace 26 m.p.h. to 36 m.p.h. / 41 k.p.h. to 57 k.p.h.

85th Percentile 35.39 m.p.h. / 56.95 k.p.h.

90th Percentile 36.46 m.p.h. / 58.67 k.p.h.

95th Percentile 38.04 m.p.h. / 61.21 k.p.h.

Traffic Collision History Report

Midblock Collisions

Total Number of Collisions: 8

Street: 185TH AVE NE

Limit 1: REDMOND WAY

Limit 2: NE 76TH STREET

Date Range Reported: 1/1/00 - 6/30/04

8/10/2004

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Date	Time	Dist.	Direction	Location	Type of Collision	Weather	Direct. from (unit 1)	Veh Actions (Unit 1)	Direct. from (unit 2)	Veh Actions (Unit 2)	# Injured	# Killed
10/5/00	13:15	0'	In Int	NE 68TH STREET	Sideswipe / Lane Change	Clear / Partly Cloudy	West	Making Right Turn	West	Making Right Turn		
2/8/01	19:20	0'	In Int	NE 65TH STREET	Pedestrian / Bicycle Involved	Overcast	West	Making Left Turn			1	
3/1/01	15:47	50'	South of	NE 62ND COURT	Parked Vehicle / Fixed Object	Raining	West	Making Left Turn	Vehicle Stopped	Legally Parked, Unoccupied	0	0
3/26/02	7:38	0'	In Int	NE 68TH STREET	Sideswipe / Lane Change	Clear / Partly Cloudy	Vehicle Stopped	Stopped at Signal or Stop Sign	West	Making Right Turn	0	0
9/16/02		300'	South of	NE 62ND COURT	Parked Vehicle / Fixed Object	Raining	West					
9/25/02	17:15	300'	South of	NE 68TH STREET	Right Angle / Broadside	Clear / Partly Cloudy	East	Making Right Turn	North	Going Straight Ahead	0	0
11/6/02	17:57	500'	South of	NE 76TH STREET	Parked Vehicle / Fixed Object	Raining	South	Going Straight Ahead			0	0
6/19/03	14:22	325'	North of	REDMOND WAY	Sideswipe / Lane Change	Clear / Partly Cloudy	North	Changing Lanes	North	Stopped in Roadway	0	0

ATTACHMENT E

Subject:	Standard practice on the setting of speed limits
Function:	Speed Limit Management
Effective Date:	08/17/2004
Written By:	Jeff Palmer, Neighborhood Traffic Calming Coordinator
Approved By:	Donald Cairns P.E. 8/17/04
Background:	<p><u>I. Washington State Law</u> SPEED RESTRICTIONS Selected Sections:</p> <p>RCW 46.61.400 Basic rule and maximum limits. RCW 46.61.415 When local authorities may alter maximum limits. RCW 46.61.419 Private roads -- Speed enforcement. RCW 46.61.430 Authority of secretary of transportation to fix speed limits on limited access facilities exclusive -- Local regulations RCW 46.61.435 Local authorities to provide "stop" or "yield" signs at intersections with increased speed highways -- Designated as arterials. RCW 46.61.440 Maximum speed limit when passing school or playground crosswalks -- Penalty, disposition of proceeds. RCW 47.36.030 Traffic control devices - Specifications to be furnished to counties & cities.</p> <p><u>II. Redmond Municipal Code</u> SPEED REGULATIONS Selected Sections:</p> <p><u>10.24.010</u> State speed laws applicable -- Exceptions. <u>10.24.020</u> Decreasing state speed limit at intersections. <u>10.24.030</u> Increasing state speed limit. <u>10.24.040</u> Decreasing state speed limit. <u>10.24.050</u> Posting speed limits. <u>10.24.055</u> Advisory speed limits. <u>10.24.060</u> Schedule. <u>10.24.065</u> School zones.</p> <p><u>III. Manual on Uniform Traffic Control Devices</u> Selected Section:</p> <p>Section 2B.13 Speed Limit Sign (R2-1)</p>
Practice:	<p>With limited exception, Washington State law establishes a 25 mph speed limit on the streets in city's and towns. The City of Redmond considers a number of factors bearing on safe speeds when looking at changes to the legislated speed limit on non-limited access roads:</p> <p><u>Areas of Consideration</u></p> <ol style="list-style-type: none"> 1. Prevailing vehicle speeds: 85th percentile speed and pace speed of the study site and the associated or adjacent posted speeds on either side of the study site; 2. Physical features of the roadway: geometric design, shoulder condition, lateral clearance, grade, alignment, intersections, roadside activity, sight distance limitations, roadway design speed, lane width, spacing of driveways, intersections and traffic signals, pedestrian facilities (sidewalks, walkways, trails), bicycle facilities (lanes and routes), on-street parking, truck routes, and distractions; 3. Crash experience: frequency and/or statistical ranges; and 4. Conditions, some of which may not be readily apparent to the driver: land use, access density and conditions, arterial functional classification, proximity to schools, parks, and recreational facilities, volume of vehicles, bicycles, pedestrians and trucks.

ATTACHMENT F

10.24.060

SCHEDULE OF SPEED LIMITS

State Route No./ City Street Designation	Traffic Direction	From	To	Maximum Speed
140 Avenue N.E.	Both ways	South city limits	Redmond Way (SR 901)	35 mph
148 Avenue N.E.	Northbound	South city limits	N.E. 24 Street	35 mph
148 Avenue N.E.	Northbound	N.E. 24 Street	N.E. 60 Street	40 mph
148 Avenue N.E.	Both ways	N.E. 60 Street	300 feet south of N.E. 75 Street	40 mph
148 Avenue N.E.	Northbound	N.E. 75 Street	Redmond Way	40 mph
148 Avenue N.E.	Southbound	300 feet south of N.E. 75 Street	Redmond Way	40 mph
148 Avenue N.E./ N.E. 90 Street	Both ways	Redmond Way	Willows Road	40 mph
152 Avenue N.E.	Both ways	N.E. 20 Street	N.E. 31 Street	30 mph
154 Avenue N.E.	Both ways	N.E. 85 Street	N.E. 90 Street	30 mph
154 Place N.E.	Both ways	Redmond-Woodinville Road (SR 202)	North city limits	30 mph
156 Avenue N.E.	Both ways	N.E. 51 Street	Bel-Red Road	35 mph
160 Avenue N.E.	Both ways	Redmond Way	Redmond-Woodinville Road (SR 202)	30 mph
161 Avenue N.E.	Both ways	Redmond Way (SR 908)	N.E. 90 Street	30 mph
166 Avenue N.E.	Both ways	N.E. 83 Street	North city limits	30 mph
166 Avenue N.E.	Both ways	Redmond Way	Cleveland Street	30 mph
178/180 Avenue N.E.	Both ways	Union Hill Road	Redmond Way (SR 202)	35 mph
N.E. 20 Street (Northup Way)	Both ways	Bel-Red Road	148 Ave. N.E.	35 mph
N.E. 24 Street	Both ways	West Lake Sammamish	West city limits (172 Ave. N.E.)	30 mph
N.E. 24 Street	Both ways	Bel-Red Road	148 Ave. N.E.	30 mph
N.E. 31 Street	Both ways	152 Avenue N.E.	156 Ave. N.E.	30 mph
N.E. 40 Street	Both ways	West Lake Sammamish	Bel-Red Road	25 mph
N.E. 40 Street	Both ways	Bel-Red Road	148 Ave. N.E.	35 mph
N.E. 51 Street	Both ways	148 Avenue N.E.	West Lake Sammamish Road	35 mph
N.E. 85 Street	Both ways	154 Avenue N.E.	166 Ave. N.E.	30 mph

State Route No./ City Street Designation	Traffic Direction	From	To	Maximum Speed
N.E. 90 Street	Both ways	Willows Road	Redmond-Woodin- ville Road (SR 202)	30 mph
N.E. 95 Street	Both ways	Willows Road	Eastern Terminus	30 mph
N.E. 116 Street	Both ways	Sammamish River	Willows Road	35 mph
N.E. 116 Street	Both ways	162 Avenue N.E.	East city limits	35 mph
Avondale Road	Both ways	Redmond Way	North city limits	40 mph
Avondale Way	Both ways	Avondale Road	Redmond Way	30 mph
Bel-Red Road	Both ways	West Lake Sam- mamish Road	South city limits	40 mph
Cleveland Street	Both ways	Redmond Way at 160 Avenue N.E.	Redmond Way at Avondale Way	30 mph
Old Redmond Road (Collins Road)	Both ways	West Lake Sam- mamish	West city limits	30 mph
East Lake Sam- mamish Parkway	Both ways	Redmond Way	South city limits	35 mph
Leary Way	Both ways	West Lake Sam- mamish Parkway (SR 901)	Cleveland Street	30 mph
Redmond Way (SR 202)	Both ways	Avondale Road (SR 520)	East city limits	45 mph
Redmond Way (SR 908)	Both ways	W. Lake Sammamish Pkwy. N.E./Jct. SSH 2-D (SR 901) Spur	West city limits (132 Ave. N.E.)	40 mph
Redmond Way Spur (SR 901)	Both ways	W. Lake Sammamish Pkwy. N.E./Jct. SSH 2-D (SR 901)	Sammamish River Bridge	40 mph
Redmond Way Spur (SR 901)	Both ways	Sammamish River Bridge	Redmond-Woodin- ville Road/Jct. PSH2- BO (SR 522)	25 mph
Redmond Way (SR 522)	Both ways	Jct. Redmond-Wood- inville Road (164 Ave. N.E.) Jct. SSH 2-D (SR 901) Spur	East city limits (Cen- terline of Bear Creek)	25 mph
Redmond Way (SR 908)	Both ways	Sammamish River Bridge	Redmond-Woodin- ville Road (Junction of SR 202)	30 mph
Redmond Way (SR 202)	Both ways	Junction of SR 908	Avondale Road (SR 520)	30 mph
Redmond-Woodin- ville Road (SR 202)	Both ways	N.E. 87 Street	Redmond Way (SR 908)	30 mph